UNITED STATES ENVIRONMENTAL PROTECTION AGENCY - REGION I

STATE OF CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION

CERTIFIED MAIL – RETURN RECEIPT REQUESTED

November 23, 2010

Mr. Edward Lapidus
JMG Milford Realty
Wampus Milford Associates
444 Old Post Road, Suite A
Bedford, NY 10506

RE: **Supplemental Investigation Work Plan – Lot 2 and Quality Assurance Project Plan**
Supplemental Soil Sampling Activities Report
Wampus Milford Associates site, Lots 1 and 2
80 Wampus Lane, Milford, CT CTD001453232

Dear Mr. Lapidus:

Thank you for providing the "Supplemental Investigation Work Plan for the Wampus Milford Associates site, Lots 1 & 2, 80 Wampus Lane, Milford, CT", dated January 5, 2010 prepared by Environmental Resources Management (ERM) for JMG Milford Realty, LLC ("the WP"). The Connecticut Department of Environmental Protection (CTDEP) and the United States Environmental Protection Agency (EPA) reviewed the portions of the WP pertaining to Lot 1 and provided feedback to JMG in a letter dated March 11, 2010. Thank you for providing an updated schedule for Lots 1 and 2 in your April 12, 2010 letter and for implementing the Lot 1 soil sampling proposed in the Work Plan and reporting the results in the Supplement Soil Sampling Activities Report dated August 6, 2010.

This letter provides CT DEP's and EPA's recommendations and conclusions to JMG, based on review of:

- the portions of the January 5, 2010 Work Plan not addressed in EPA's March 11, 2010 letter and the Quality Assurance Project Plan (QAPP) referenced in the Work Plan, as it relates to investigation proposed for Lot 2 and groundwater monitoring; and
- the August 6, 2010 Supplemental Soil Sampling Activities Report.

Section I of this letter addresses the January 5, 2010 Work Plan. Sections II addresses the 2005 QAPP as it relates to investigation proposed for Lot 2 and groundwater monitoring. Section III addresses the updated schedules. Section IV addresses the August 6, 2010 report.

I. COMMENTS ON THE SUPPLEMENTAL INVESTIGATION WP

GENERAL COMMENTS

General comment 1:

Figure 5 in the WP showed the proposed sampling locations for Area of Concern (AOC)-16 (the Wood Block Disposal Area) and Wetland Area 2. The legend in Figure 5, together with the text in §3.2.1 of the WP, only mentioned wetland "soils." It is unclear from the available information if Wetland Area 2, and the Marsh Area

located downgradient from the gravel drainage swale (see Figure 5 in the WP), should also be considered as "sediment," at least for some periods during the year.

A key issue is that all soil samples under the current WP are proposed to be collected from 0-1 ft and 2-3 ft below grade (see p. 11 of the WP). Alternatively, the sediment sampling depth is typically 0-0.5 ft deep to reflect the "biotic zone." These different depth requirements may preclude using the "soil" samples as "sediment" samples. Furthermore, "surface" soil samples for use in an ERA typically represent 0-1 ft or, at most, 0-2 ft below grade because most biological activity is expected to occur in the upper 1 or 2 ft of soil. Two to three ft below grade represents an exposure depth not expected to be encountered by soil invertebrates or terrestrial plants, both of which were used to derive soil screening benchmarks. It is therefore recommended to evaluate only the soil data representing the 0-1 ft surface layer. In a subset of soil and sediment samples, depth profiling should be performed to characterize the vertical extent of contamination.

It is recommended to resolve these issues by providing more information on site conditions to determine if the substrate collected from these two areas should or can be evaluated in the SLERA as soil, or sediment, or both.

General comment 2:

The WP should fully explain and justify the distribution of the soil/sediment sample locations along Stubby Plain Brook, referencing results of previous soil and sediment data relative to appropriate ecological screening benchmarks. Based on the information in the WP, it is not possible to determine whether proposed soil/sediment samples will be adequate for the WP's stated intention of completing the delineation of soil that exceeds ecological benchmarks and RSR soil standards. In the course of justifying sample locations, please also specifically address the following:

- Figure 5 in the WP showed that six of the proposed soil sampling locations in Wetland Area 2 (specifically, WSS-9 to WSS-14) will be collected immediately east of AOC-16. The non-random distribution of these six samples suggested an attempt to determine if contamination from AOC-16 may have migrated into Wetland Area 2. If so, then the WP should specify that the proposed sampling locations next to AOC-16 were derived on that basis.

- Figure 5 in the WP showed that eight more wetland soil samples (specifically, WSS-1 to WSS-8) will be collected from the Marsh Area next to a short stretch of Stubby Plain Brook at and north of the "Tie Line." The WP did not explain why the wetland sampling effort was focused on that relatively small area next to the brook. Also, no soil samples (except for WSS-17 at the mouth of the gravel drainage swale) will be collected from the Marsh Area between the gravel drainage swale and Stubby Plain Brook further north.

General comment 3:

Neither Figure 5 nor the text in §3.2.1 of the WP discussed surface water sampling in the wetlands. As with the previous comment, it was unclear if the wetland areas are filled with surface water during part of the year, and should therefore be sampled for surface water analysis. It is recommended to provide more information on these habitats in order to resolve this potential data gap and include collection of surface water samples if the wetland areas are filled with surface water during part of the year.

General comment 4:

The WP should reference the background samples that were collected in surface water, sediment, and soil in 2005. Please be aware that any comparison of site samples to background samples should not be performed as part of the SLERA itself. A background comparison is an acceptable step in the Ecological Risk Assessment process, but is normally reserved for the first step in the Baseline Ecological Risk Assessment (BERA), if SLERA results indicate that a BERA is necessary.

General comment 5:

Section 3.2.3 acknowledged the first two SLERA steps of the eight-step ERA process. However, the text focused mostly on identifying screening benchmarks (i.e., the "characterization of effects" portion of a SLERA) and did not provide details on the other components of a SLERA. The following elements need to be included:

- Selecting target receptor groups of concern
- Developing a site conceptual model to show how exposure pathways link contaminant sources to these target receptors
- Developing assessment and measurement endpoints to evaluate the risk to the receptors
- Identifying exposure units to help organize the analytical data
- Explaining how exposure will be calculated
- Identifying how risk will be characterized (typically based on hazard quotients)
- Explaining how background data will be used in the risk characterization
- Developing an uncertainty analysis

Please expand section 3.2.3 by including and discussing these elements. Agreeing on these elements during the SLERA work plan stage will streamline review and approval of the SLERA report.

General comment 6:

The WP is missing the sampling and field measurements procedures. Please attach the sampling procedures, the field measurements procedures, and field instrument calibration procedures to the WP and add a brief description of the procedures to the Plan. Also, please include the instructions for collecting quality control samples (e.g., field duplicates, etc.) in the sampling procedures and an equipment setup diagram for the groundwater sampling.

General comment 7:

Please include the discharge of impacted groundwater to surface water and sediment as a pathway for evaluation in the SLERA. Data from monitoring wells characterizing the plume should be used to represent groundwater concentrations for purposes of evaluating this pathway.

SPECIFIC COMMENTS

Specific comment 1: §1.0 Introduction, 2nd ¶, 4th & 5th sentences, p.1.

The target sentences specified that a 2.47-acre parcel of undeveloped forested wetland was created for donation to the city of Milford. The text specified that this parcel was not addressed in the WP because it lacked AOCs. However, Figure 5 of the WP showed the same general area with nine wetland soil sampling locations in the "Marsh Area". Please update the text in the introduction about not addressing the 2.47-acre parcel to reflect the proposed soil sampling program.

Specific comment 2: §3.2.1 AOC 1 – Stubby Plain Brook & Associated Wetlands, p. 11

The WP states that analysis for samples collected at AOC 1 will include site specific metals by USEPA Method SW846 6010A (ICP). Specifically, the WP states, these metals include Cd, Cr, Cu, Pb, and Zn. However, Page 1-1 of the February 2005 QAPP states that treated wastewater discharged to the Stubby Plain Brook via AOC 1 may have contained Cadmium, Chromium, Copper, Lead, Nickel, Silver, Tin and Zinc and Cyanide. Analyses for soil, sediment and surface water performed in 2005 included these constituents plus aluminum and beryllium. Please revise the work plan to include all constituents which may have been released to the Stubby Plain Brook from the former Burndy/ Framatome facility or were previously detected at levels above appropriate human health or ecological benchmarks, or provide justification for eliminating constituents from further evaluation.

Specific comment 3: §3.2.1 AOC 1 – Stubby Plain Brook & Associated Wetlands, 1st ¶, p. 12.

This paragraph described collecting three soil samples from the gravel drainage swale (see Figure 5 in the WP). The swale descriptor suggested that a sample may have to be collected by first removing the overlying "gravel" before reaching the "soil" underneath it. Also, the sampling depth of 0-0.5 ft was different from the sampling depth for all other soil samples (i.e., 0-1 ft and 2-3 ft; see top two bullets on p. 11) to be collected elsewhere in the wetlands and the Wood Block Disposal Area. The proposed depth of 0-0.5 ft reflecting the depth interval typically recommended for a sediment sample instead of a soil sample. Please provide more information on the sampling approach and justify the sampling depth of the three gravel drainage swale samples.

Specific comment 4: §3.2.1 AOC 1 – Stubby Plain Brook & Associated Wetlands, First ¶, Last sentence, p. 12.

The last sentence stated that the three samples collected from the gravel drainage swale will be analyzed for volatile organic compounds, select metals, and petroleum hydrocarbons. It is unclear if "petroleum hydrocarbons" refers to Total Petroleum Hydrocarbons (TPH) or to Polycyclic Aromatic Hydrocarbons (PAHs). Please define the term and be aware that TPH is not a useful analytical measure for use in a SLERA because ecological screening benchmarks are not available for this generic class of compounds.

Specific comment 5: §3.2.2: AOC 16 – Wood Block Disposal Area, 2nd ¶, 5th sentence, p. 12.

This paragraph stated that two soil samples will be collected from each test pit at AOC 16. One sample would come from within the fill zone, whereas the other one would be collected below the fill zone. The last sentence of the 2nd paragraph of Section 2.2.2 (AOC 16 – Wood Block Disposal Area) on p. 7 stated that "the buried debris is located in a roughly 3-4 foot horizon, extending from grade down to the observed water table."

The available information suggested that the top soil sample collected from each pit could represent a four-foot deep layer. Please clarify whether the purpose of these samples is to delineate the extent of contamination for remediation planning or whether these samples are intended for consideration in the SLERA. As mentioned previously in this letter, samples collected from the biologically active zone (the top 1 or 2 ft for soil; the top 6 inches for sediment) should be considered in the SLERA.

Specific comment 6: §3.2.3 Ecological Risk Assessment, 2nd ¶, 2nd sentence, p. 13.

The text stated that "The first two steps in this program, which ERM would initially perform using the surface water, sediment and soil analysis data generated previously and as part of this Work Plan,…". This sentence indicated that older analytical data will be evaluated in the SLERA. Section 2.2.1 (AOC 1 – drainage swale, Stubby Plain Brook & Associated Wetland Areas) of the WP also summarized previous environmental sampling at the facility. However, it was unclear which of the older data will be retained for use in the SLERA. For example, all of the analytical data pertaining to the drainage swale area are no longer relevant because the swale was extensively excavated and restored in 2007.

It is recommended to generate a table to summarize past and yet-to-be-collected SLERA data in terms of the target habitats, the sample matrices, sample depths; the number of samples available or expected for each matrix, the contaminant classes analyzed in the samples, and the sampling dates (month/year). This information will provide a concise overview of the data sets available for use in the SLERA. For any non-detect results in past data to be considered in the SLERA, please show that the reporting limits were below the current applicable screening benchmark.

Specific comment 7: §3.2.3 Ecological Risk Assessment, Surface Water, Sediment, and Soil Benchmarks, p. 14 & 15.

For the surface water benchmarks on Page 14, please state in what order the surface water benchmarks would be selected (note: the order for the sediment and soil benchmarks are provided on pp. 14 & 15, respectively). For example, it might be in the order in which the references were presented or based on the lowest available benchmark.

Please also develop matrix-specific tables to show the references, the contaminant-specific benchmarks available from each reference, and the final values selected for use in the SLERA.

Specific comment 8: §3.2.3 Ecological Risk Assessment, last ¶, p. 15.

The text stated that "the soil sampling results … will also be compared against the Remediation Standard Regulations Direct Exposure Criteria (DECs) and Pollutant Mobility Criteria (PMCs)". The DECs are soil benchmarks protective of residential or commercial/industrial exposures by human populations. The PMCs are benchmarks designed to protect groundwater from contaminants present in the overlying soil column. Please be aware that these benchmarks do not pertain to the SLERA.

II. COMMENTS ON THE 2005 QUALITY ASSURANCE PROJECT PLAN (QAPP)

GENERAL COMMENTS

General comment 1:

The QAPP was written in February of 2005 to help characterize AOC 1 (the drainage swale) at the facility. Many of the elements in this QAPP (e.g., quality objectives and criteria, field sampling protocols, sampling handling and custody, quality assurance issues) would equally apply to the proposed ecological evaluation. However, several other elements would change (e.g., project schedule, project organization, number of samples, sampled matrices, target analytes).

It is recommended to prepare a QAPP addendum to address these new elements specific to the 2010 WP. It was also noted that section 5 (p. 19) of the WP referenced a QAPP prepared in 2006. It appears that the QAPP date referenced should have been 2005 instead of 2006.

General comment 2:

Tables 1-1a (soil), 1-1b (sediment), and 1-1c (surface water) of the 2005 QAPP summarized analytical methods, target clean-up criteria, and detection limits for all the target analytes. Each table included up to three "ecological criteria" per analyte.

Instead, it is recommended to provide a single ecological criterion per analyte, based on the screening benchmark selection process outlined in specific comment 7 above. Each final criterion would then serve as the project action limit for comparison against the practical quantitation limits provided in these three tables.

Please ensure that the screening benchmarks used in developing Tables 1-1a, 1-1b, and 1-1c in the 2005 QAPP correspond to those proposed in the WP. For sediment and surface water, Tables 1-1b and 1-1c do not appear to consider all sediment benchmarks proposed in the WP.

General comment 3:

Under "Laboratory Analysis," on page 17 of the WP, the analytical list includes 1,4-dioxane using modified Method 8260 in SIM mode. The QAPP does not discuss the 1,4-dioxane analysis. Please add 1,4-dioxane analysis to the QAPP including the laboratory's analytical procedure.

SPECIFIC COMMENTS

Specific comment 1: Page 4-3, 4.2.3 Surface Water Matrix

The first bullet indicates that the surface water sample includes the surface scum. Is this correct? If the sample does not include the surface scum then the container must be submerged under the water. If the sample containers contain a chemical preservative then the water sample is collected using a sampling device and the water is transferred to the sample container.

Specific comment 2: Page 4-3, 4.2.4 Groundwater Matrix

Please identify the manufacturer and model number of the equipment to be used for low-flow groundwater sampling (to be performed using the updated EPA *Region1 Low Stress (low flow) Purging and Sampling Procedure for the Collection of Groundwater Samples from Monitoring Wells*, July 30, 1996, revised January 19, 2010, revision 3 along with EPA Region 1 SOP *Calibration of Field Instruments (temperature, dissolved oxygen, conductivity/specific conductance, oxidation/reduction potential [ORP], and turbidity]*, June 3, 1998, revised January 19, 2010).

Specific comment 3: Page 4-6, 4.4 Calibration and Corrective Action – Field Instrumentation

Please change the following sentence: "all field instrument calibrations will be performed daily . . . instruction" to: "all field instrument calibrations will be performed daily and the instrument checked at the end of the day to determine if the instrument remained in calibration throughout the day". This check is performed while the instrument is in measurement mode not calibration mode.

Since each field instrument manufacturer has their own way of calibrating their instruments, please use the EPA Region 1 SOP *Calibration of Field Instruments (temperature, dissolved oxygen, conductivity/specific conductance, oxidation/reduction potential [ORP], and turbidity]*, June 3, 1998, revised January 19, 2010, available for download on EPA's website: http://www.epa.gov/region1/lab/qa/qualsys.html, for consistency in calibrating the field instruments. This procedure is a generic procedure which should apply to all field instruments. Please also identify, in the QAPP, the instrument manufacturer and model number plus the calibration standards/solutions to be used.

Specific comment 4: Page 6-1, 6.2 Laboratory Methods and Table 6-2

Please revise section 6.2 so the methods agree with Table 6-2. Please attach the laboratory's analytical procedures which go along with these methods to this Plan.

Specific comment 5: Page 10-1, Assessments and Response Actions

This section only covers the laboratory. Please revise this section so it also includes the field portion of the project.

III. April 12, 2010 UPDATED SCHEDULES FOR LOT 1 AND LOT 2

CT DEP and EPA have found the April 12, 2010 schedule to be acceptable. The schedule targets investigation field work for Stubby Plain Brook, associated wetlands, and the Wood Block Disposal Area of Lot 2 for March 2012. CT DEP and EPA encourage JMG to work in the interim toward finalizing the investigation work plan so that field work can start on schedule.

IV. AUGUST 6, 2010 SUPPLEMENTAL SOIL SAMPLING ACTIVITIES REPORT

CT DEP and EPA accept the data and conclusions reported in the Supplemental Soil Sampling Activities Report, dated August 6, 2010.

Concerning subsequent steps for Lot 1, JMG's April 12, 2010 letter regarding "Updated Schedule and Response to DEP & EPA March 11, 2010 Letter" included a schedule for Lot 1 which specified that the Ecological Receptor Exposure Pathway Scoping Checklist would be completed by May 30, 2010. The August 6, 2010 letter did not include the completed checklist and did not provide further status regarding the schedule for completing the checklist. Please provide the completed checklist within 60 days of the date of this letter.

Please provide the WP and QAPP revisions requested above to CTDEP and EPA within 120 days of the date of this letter. In addition, please provide the completed Ecological Receptor Exposure Pathway Scoping Checklist for Lot 1 within 60 days of the date of this letter.

Thank you for your efforts to achieve RCRA Corrective Action and Connecticut Property Transfer Act goals at the subject site. Please do not hesitate to contact Gene Shteynberg of CTDEP at 860/424-3283 or Stephanie Carr of EPA at 617/918-1363 if you have any questions.

Sincerely,

Gennady Shteynberg

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cc: J. Pfeifer, ERM
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